

IN THE SPECIFICATION:

Amend the specification as follows:

Delete the paragraph spanning page 7, line 19 through page 8, line 3 and insert the following therefor:

A first embodiment of the present invention refers to a method for the diagnosis of Schistosoma through the amplification by PCR of a DNA sequence of Schistosoma sp.. The method of the present invention is characterised by the stages of:

- (a) collection of the sample to be tested;
- (b) extraction of the Schistosoma sp. DNA from the sample obtained in stage (a);
- (c) amplify a region of the Schistosoma DNA extracted in stage (b) with specific primers constructed from the original sequence described in ~~ID-SEQ n.~~ SEQ ID NO:1;
- (d) separate the products of the amplifications of stage (c) by electrophoresis, followed by detection using appropriate colouring methods.

Delete the paragraph spanning lines 16-18 of page 8 and insert the following therefor:

FIGURE 1: Shows the DNA sequence (SEQ ID NO:1) of the repeater unit of *S. mansoni*. It indicates, in bold type, the localisation of the specific primers described in the present invention.

Delete the paragraph spanning page 11, line 3 through the last line of page 11, and insert the following therefor:

After extraction, the DNA is selectively amplified by Polymerase Chain Reaction. Through the PCR, a specific sequence of the *Schistosoma sp.* genoma is selectively copied millions of times, permitting the detection of the parasite DNA. The reaction is a sequential process that requires at least two primers, small sequences of DNA complementary to the parasite DNA, that will be extended enzymatically, presenting a faithful copy of this DNA. Adding large quantities of primers, together with other necessary reagents, millions of copies of the parasite DNA are obtained. The primers of the PCR employed here were specially designed for this invention, based on the original highly repetitive sequence of the *S. mansoni* genoma as described in ~~ID SEQ n.~~ SEQ ID NO:1 and also illustrated in Figure 1. It must be understood that other primers may be constructed having nucleotide sequences that are functionally equivalent in relation to ~~ID SEQ n.~~ SEQ ID NO:2 and ~~ID SEQ n.~~ SEQ ID NO:3. Such sequences are termed equivalent if functionally the corresponding biopolymers can perform the same role, without being identical, in view of the usage or purpose considered. The equivalent sequences may be the result of variability, as such, any modification in a sequence, spontaneous or induced, whether by substitution and/or deletion and/or insertion of nucleotide, and/or extension and/or shortening of the sequence at one of its extremities. An unnatural variability can result from genetic engineering techniques.

Delete the paragraph spanning page 12, line 19 through page 13, line 8 and insert the following therefor:

The product from the amplification promoted by PCR is a fragment, or a series of DNA fragments of different sizes which can be separated through electrophoresis, followed by appropriate techniques of colouring which allow adequate visualisation of the DNA in gel. Due to the great specificity of PCR, the amplified DNA of the parasite can be differentiated from the other products of the amplification based on its specific size. In this manner, the presence or absence of the infection can be determined, most times, simply by visual analysis of the amplified products, therefore, by the presence or not of the fragment with a weight corresponding to that of the parasite. In the present invention, the PCR is employed to amplify and visualise a specific fragment of DNA originally described in *S. mansoni*, and also amplify specific regions of other species of *Schistosoma*, leading to the conclusion that the repetitive and specific region of the DNA originally verified in *S. mansoni* and described in ~~ID SEQ n.~~ SEQ ID NO:1 is common to all the other species of *Schistosoma*.

Delete the Table 1, spanning lines 19-21 of page 13 and insert the following therefor:

| <u>ID SEQ SEQ</u> | Primers |
|-------------------|-----------------------------|
| ID NO: | |
| 2 | 5' -GATCTGAATCCGACCAACCG-3' |
| 3 | 5' -ATATTAACGCCACGCTCTC-3' |

Delete the last paragraph of page 18, and insert the following therefor:

The DNA of 4 samples of serum was purified using 100 µl/sample employing the GLASS-MAX Glass-max® (system used to purify DNA fragments) DNA isolation spin cartridge system (Life Technologies), in accordance with the instructions of the manufacturer. 2 µl of this DNA were then used in the amplification by PCR, in the same conditions described above. The serum from persons previously examined by the Kato-Katz method was used, having 2 positive and 2 negative samples.

Insert the attached Sequence Listing in place of the Sequence Listing submitted June 17, 2002.